

DNR Drought Assessment  
Committee Meeting  
November Presentation  
Nov. 13, 2003



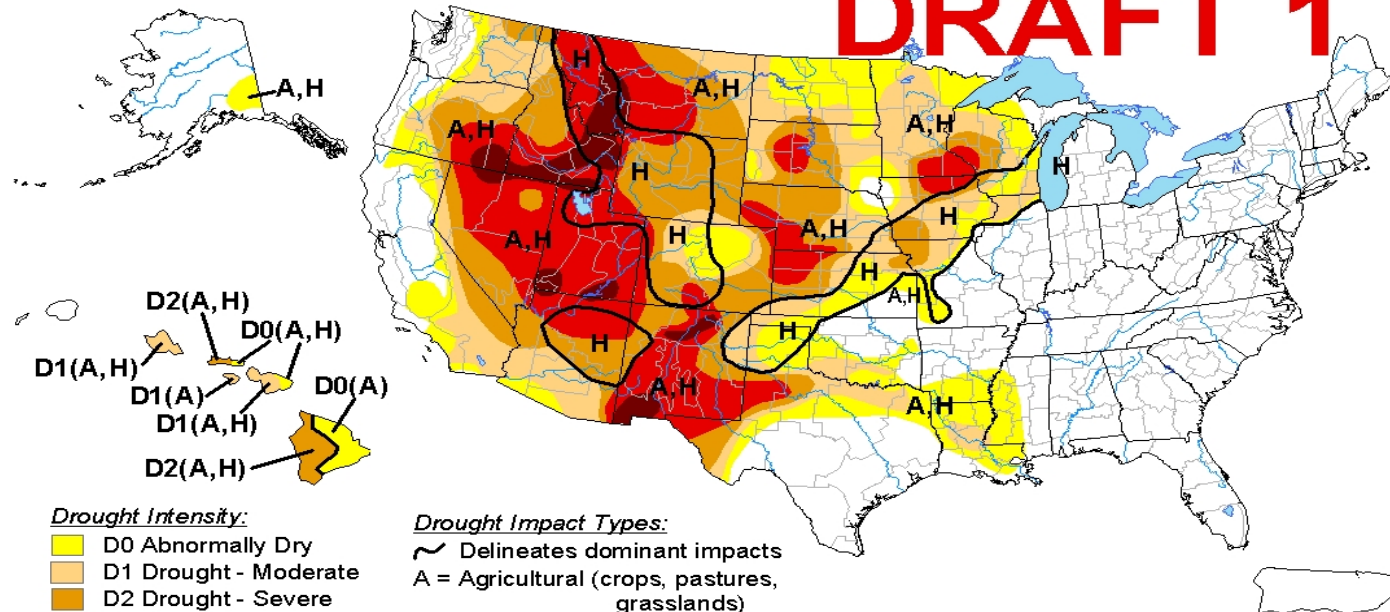
Missouri  
Department of  
Natural Resources

# U.S. Drought Monitor

November 11, 2003

Valid 8 a.m. EST

# DRAFT 1



## Drought Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

## Drought Impact Types:

- Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)

*The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.*

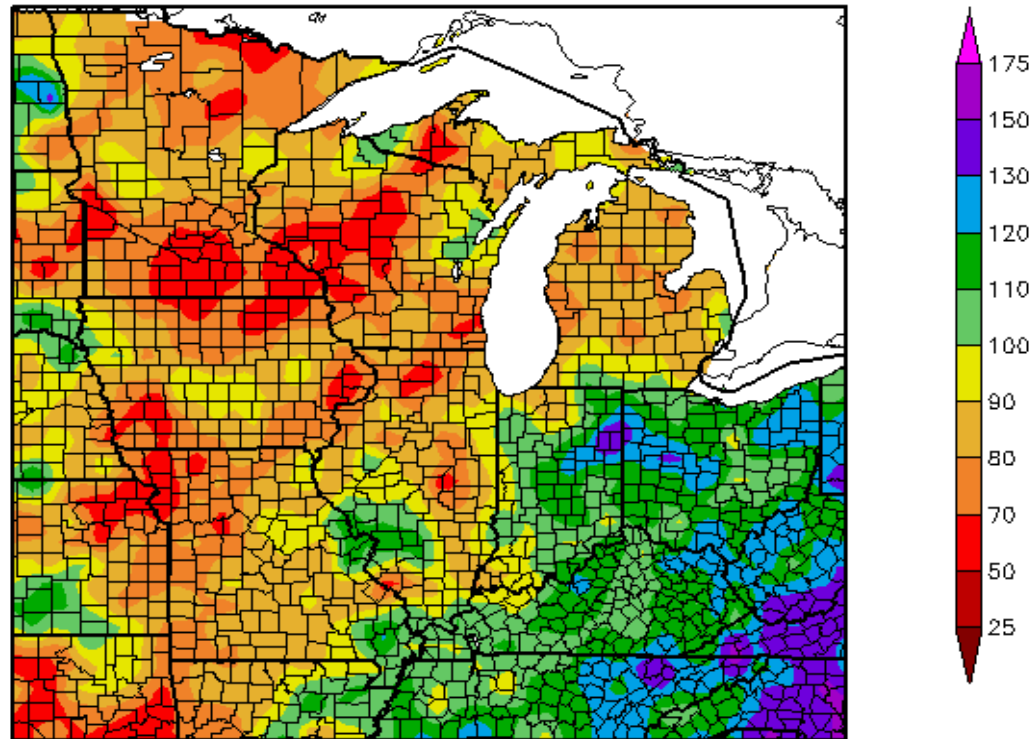
<http://drought.unl.edu/dm>



**Released Thursday, November 13, 2003**

**Author: Rich Tinker, NOAA/NWS/NCEP/CPC**

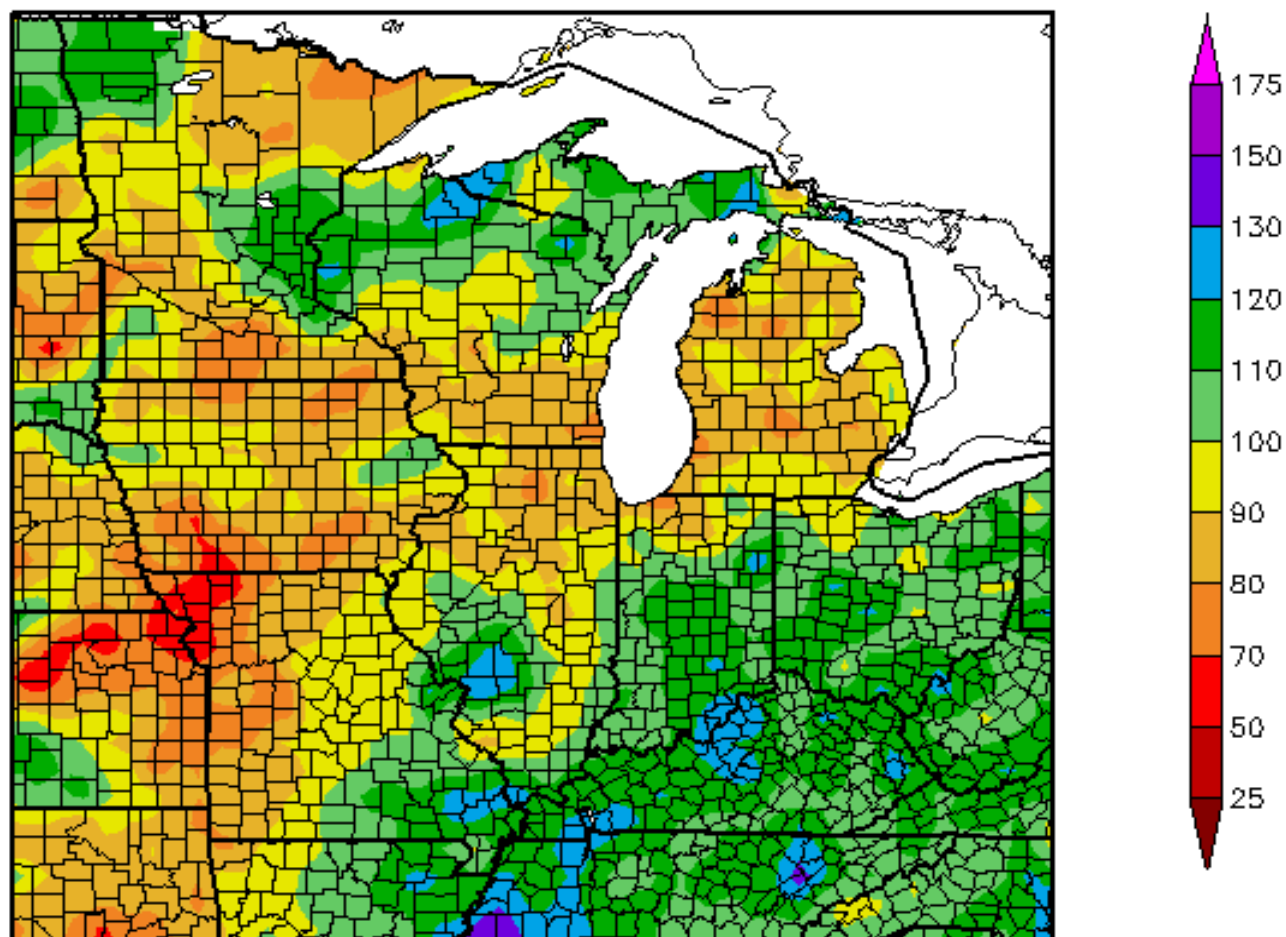
Percent of Normal Precipitation (%)  
11/11/2002 – 11/10/2003



Generated 11/11/2003 at HPRCC using provisional data.

NOAA Regional Climate Centers

Percent of Normal Precipitation (%)  
11/11/2001 – 11/10/2003



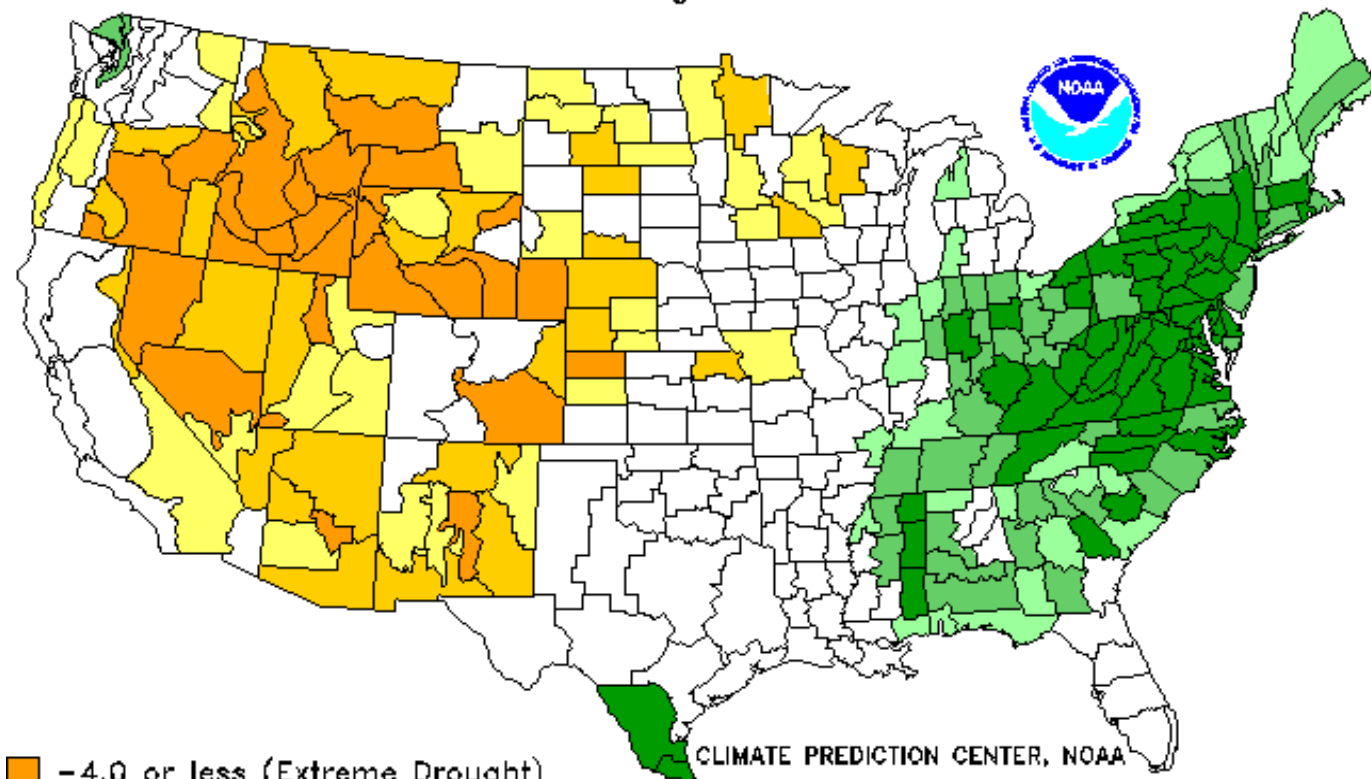
Generated 11/11/2003 at HPRCC using provisional data.

NOAA Regional Climate Centers

# Drought Severity Index by Division

Weekly Value for Period Ending 8 NOV 2003

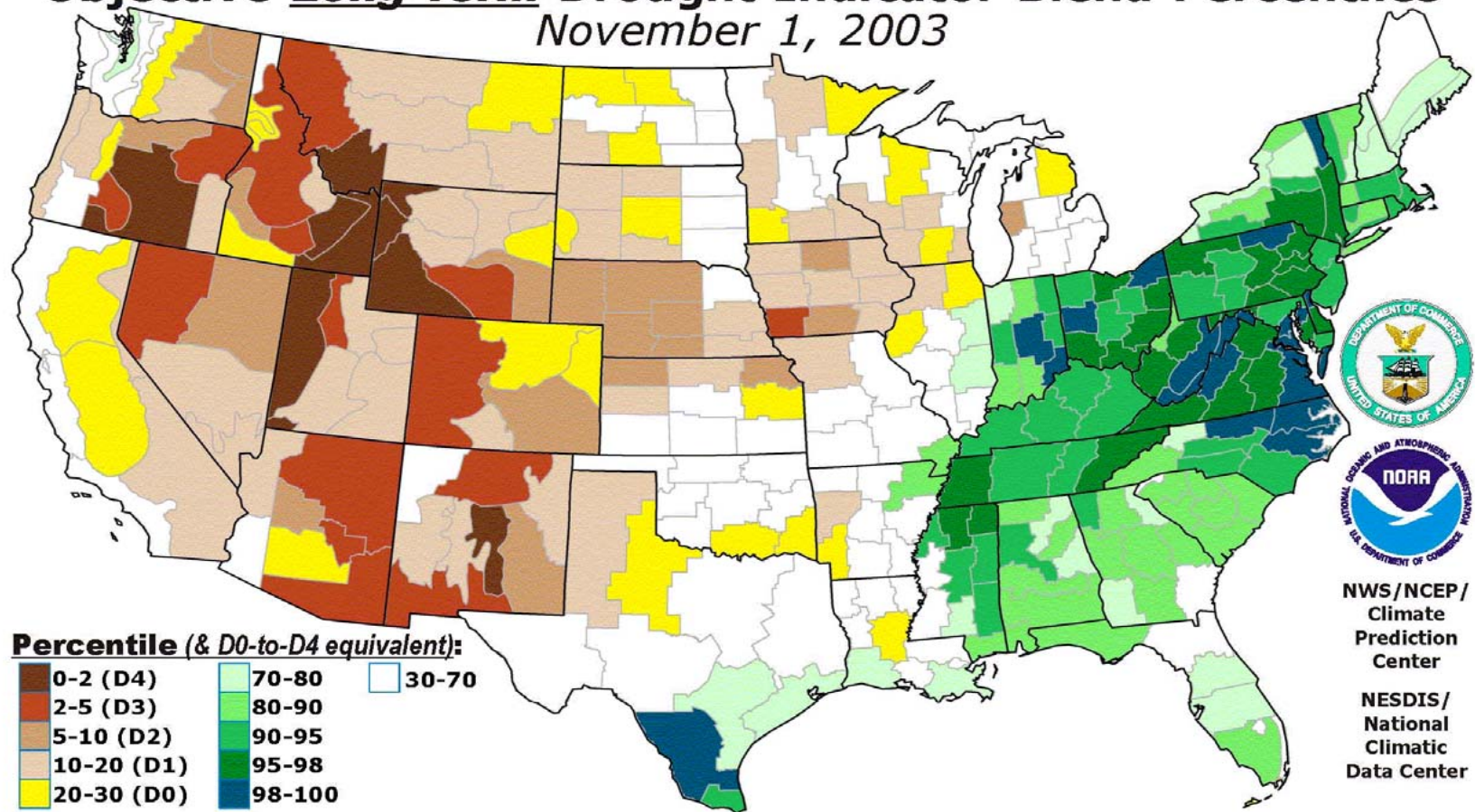
Long Term Palmer





# Objective Long-Term Drought Indicator Blend Percentiles

November 1, 2003



## INPUTS (as Percentiles):

25% Palmer Hydrologic Index  
 20% 24-Month Precipitation  
 20% 12-Month Precipitation  
 15% 6-Month Precipitation  
 10% 60-Month Precipitation  
 10% CPC Soil Model

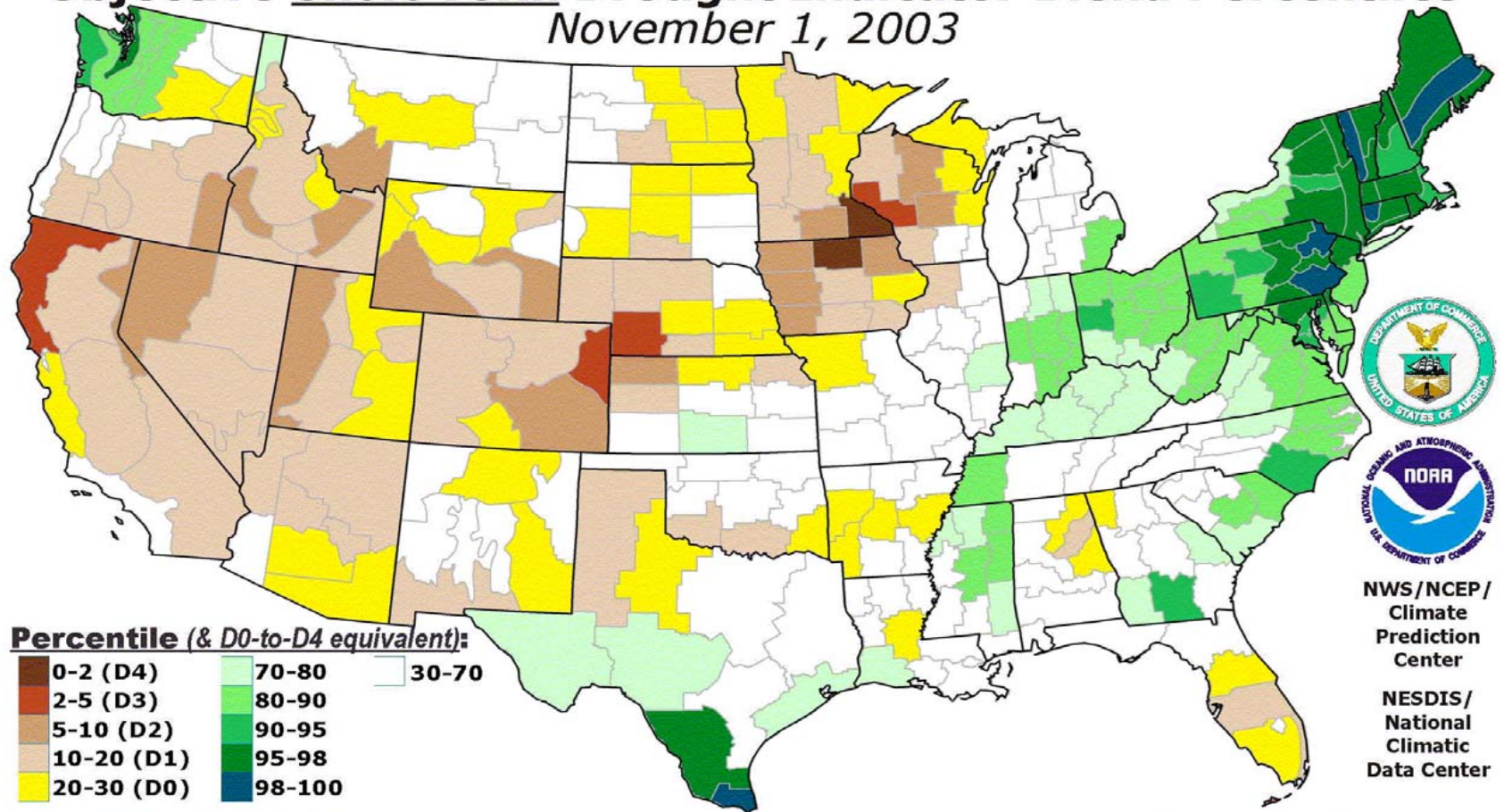
This map approximates impacts that respond to precipitation over several months to a few years, such as reservoir content, groundwater depth, and lake levels.

This map is based on preliminary climate division data. Local conditions and/or final data may differ. **The relationship between indicators and water supplies can vary markedly with location, season, source, and management practices.** Do not interpret this map too literally. See full product description for more details.



# Objective *Short-Term* Drought Indicator Blend Percentiles

November 1, 2003



## INPUTS (as Percentiles):

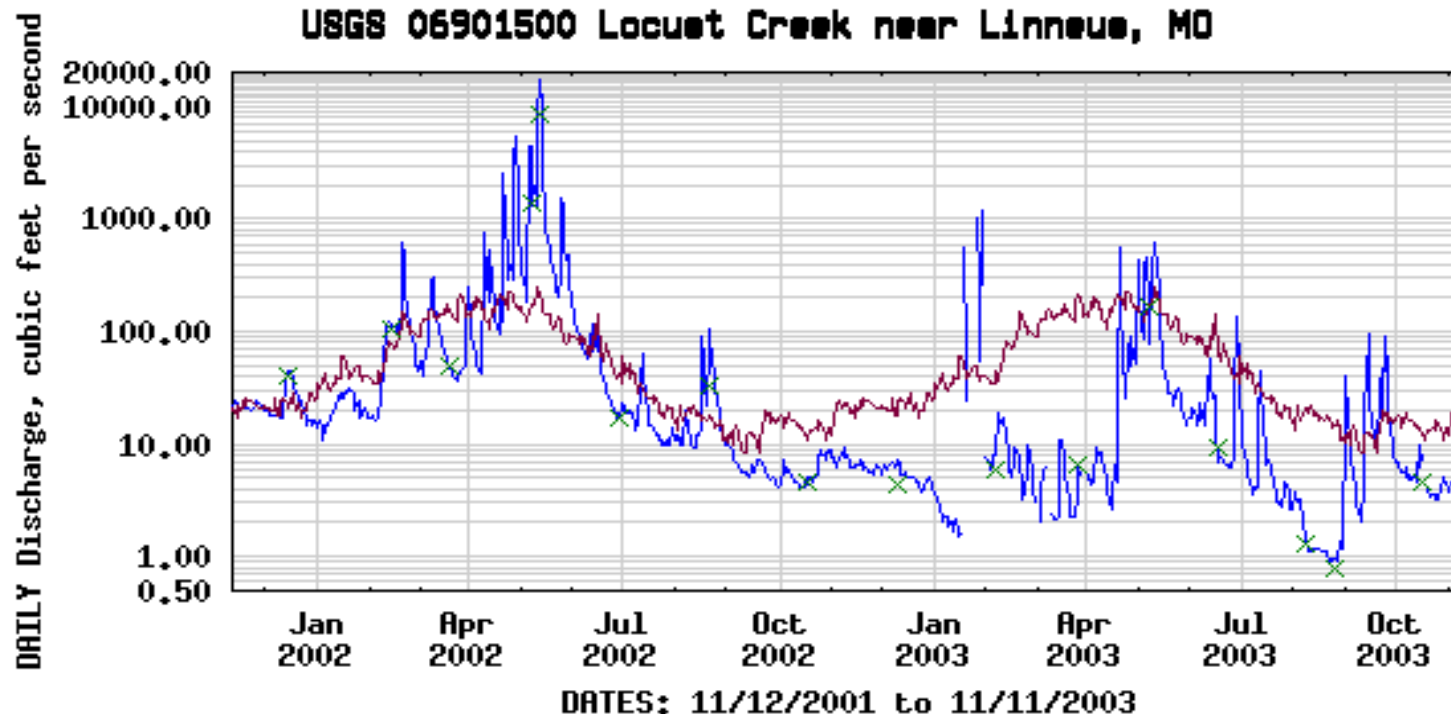
- 35% Palmer Z-Index
- 25% 3-Month Precipitation
- 20% 1-Month Precipitation
- 13% CPC Soil Model
- 7% Palmer Drought Index

**This map approximates impacts that respond to precipitation over several days to a few months, such as agriculture, topsoil moisture, unregulated streamflows, and most aspects of wildfire danger.**

This map is based on preliminary climate division data. Local conditions and/or final data may differ. The relationship between indicators and impacts varies with location and season. Do not interpret this map too literally. See full product description for more details.



# USGS 06901500 Locust Creek near Linneus, MO



## EXPLANATION

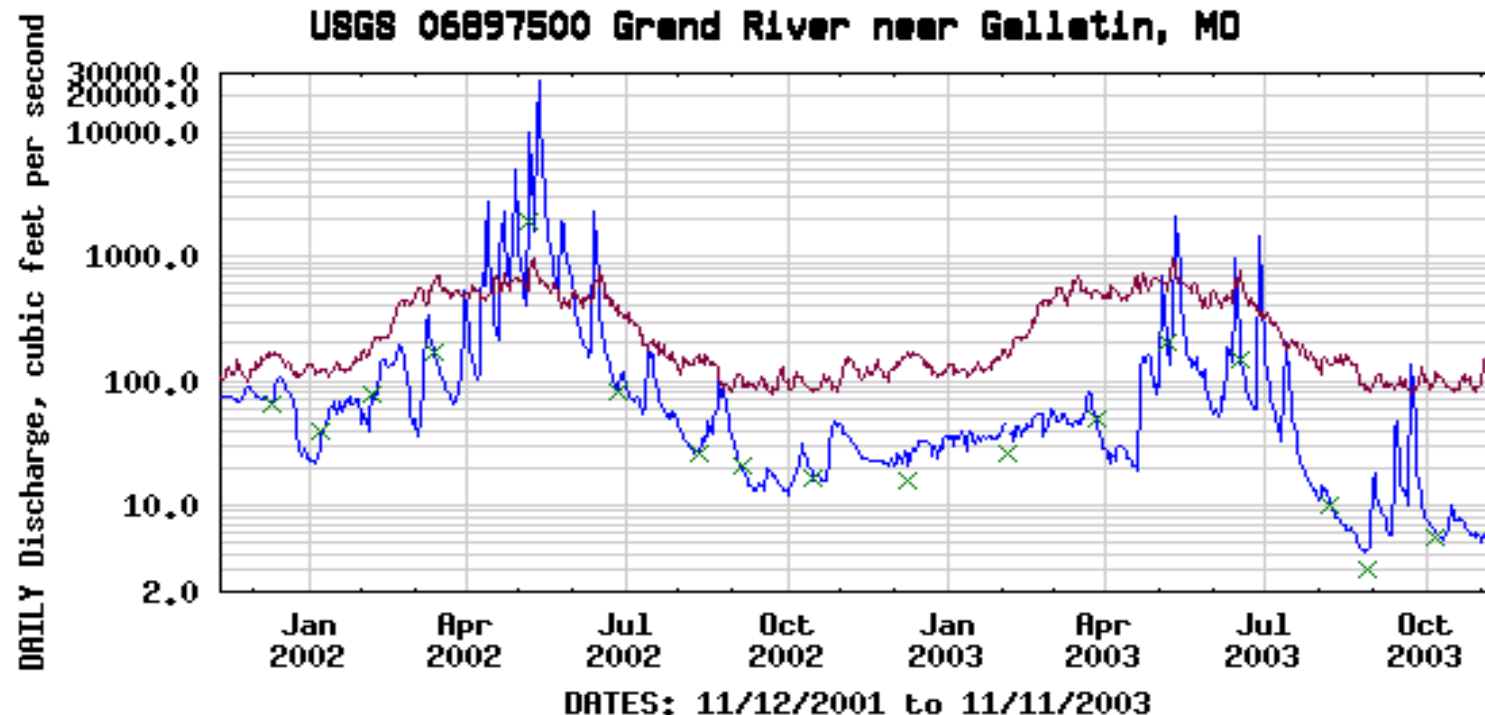
- DAILY MEAN DISCHARGE
- MEDIAN DAILY STREAMFLOW BASED ON 45 YEARS OF RECORD
- × MEASURED Discharge

Provisional Data Subject to Revision





# USGS 06897500 Grand River near Galletin, MO



## EXPLANATION

— DAILY MEAN DISCHARGE

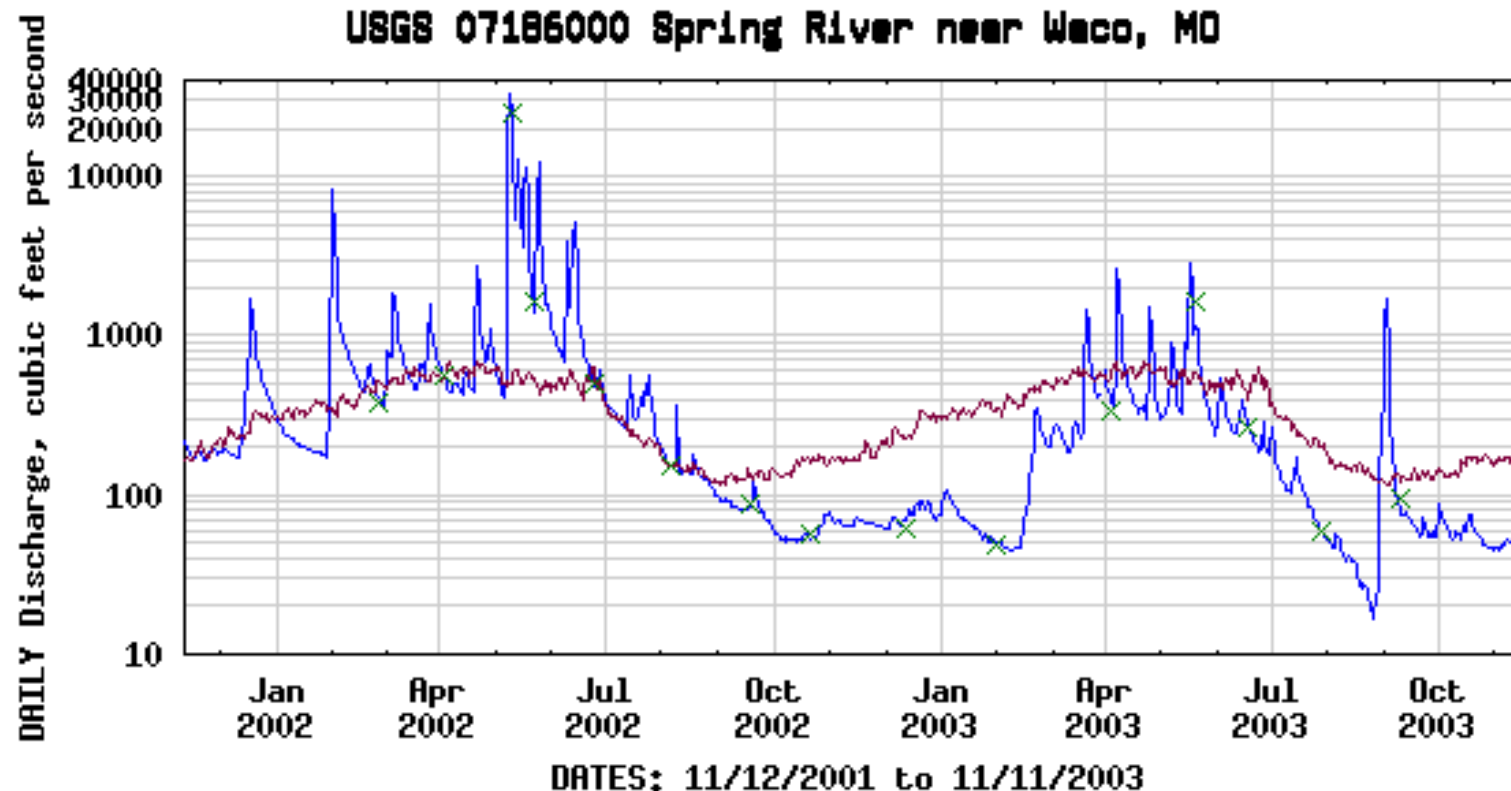
— MEDIAN DAILY STREAMFLOW BASED ON 82 YEARS OF RECORD

× MEASURED Discharge

Provisional Data Subject to Revision



## USGS 07186000 Spring River near Waco, MO



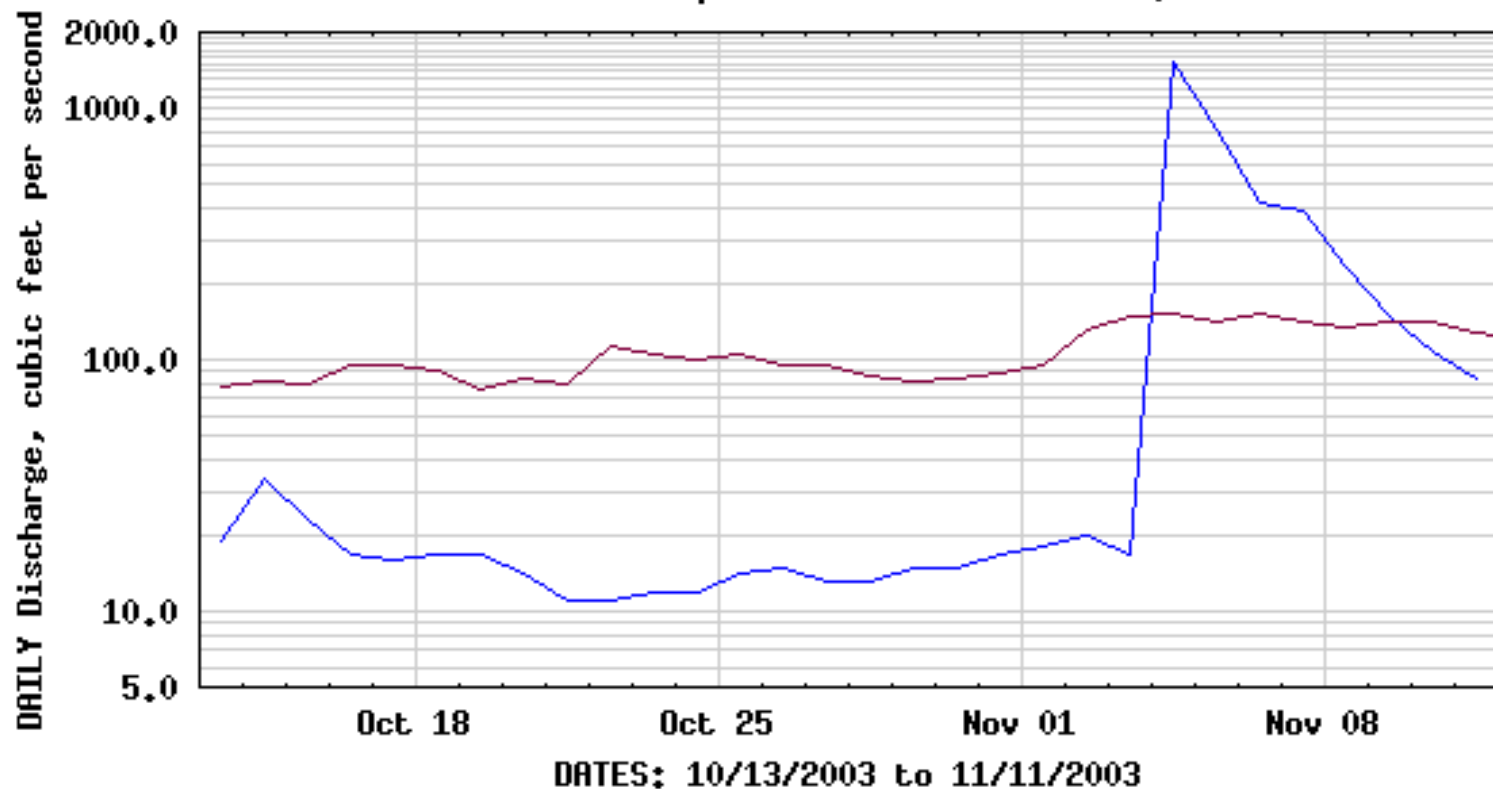
### EXPLANATION

- DAILY MEAN DISCHARGE
- MEDIAN DAILY STREAMFLOW BASED ON 78 YEARS OF RECORD
- × MEASURED Discharge

Provisional Data Subject to Revision



# USGS 06899500 Thompson River at Trenton, MD



## EXPLANATION

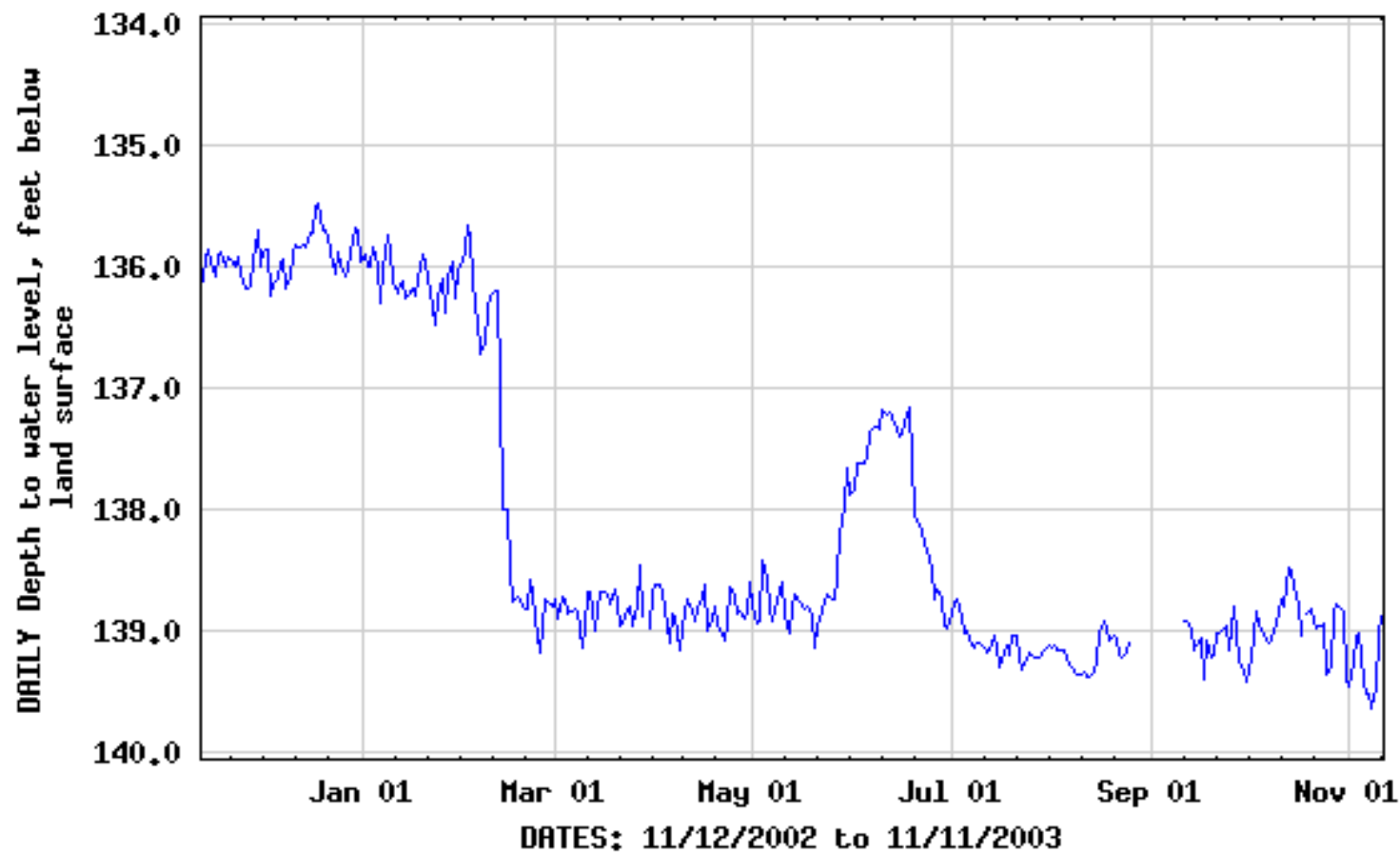
— DAILY MEAN DISCHARGE

— MEDIAN DAILY STREAMFLOW BASED ON 74 YEARS OF RECORD

Provisional Data Subject to Revision



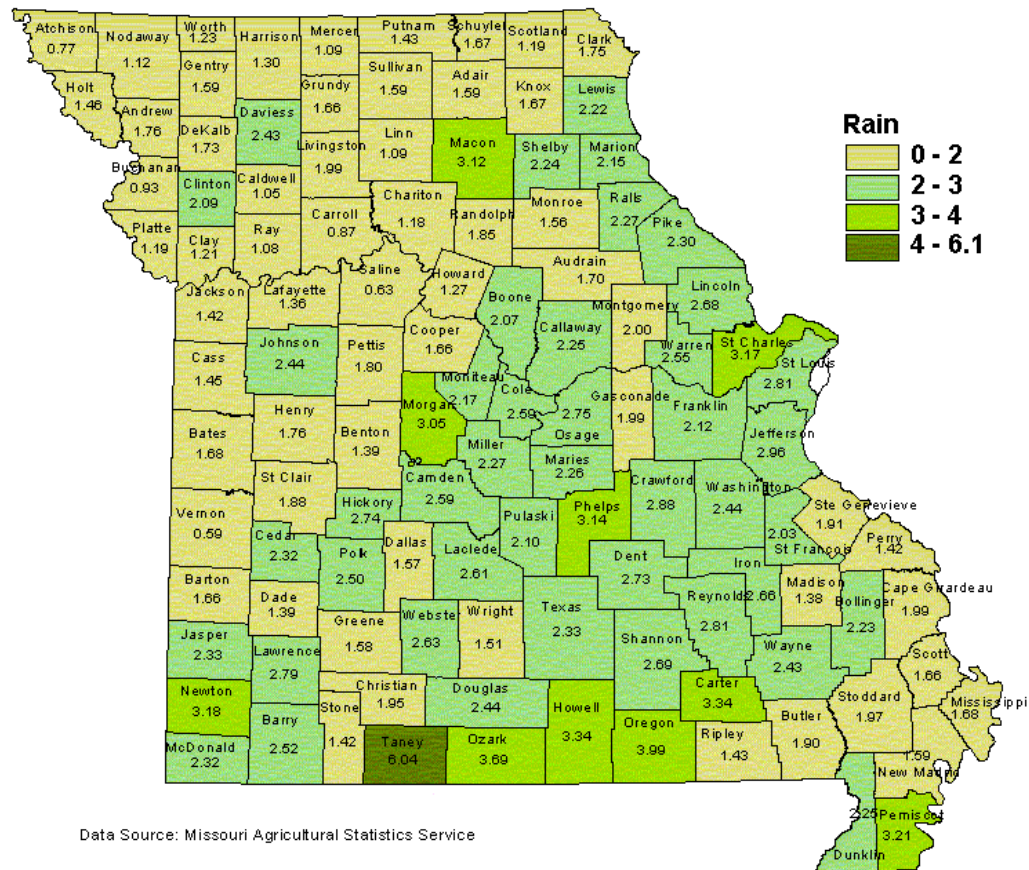
**USGS 400458093582001 Coffey**



**Provisional Data Subject to Revision**



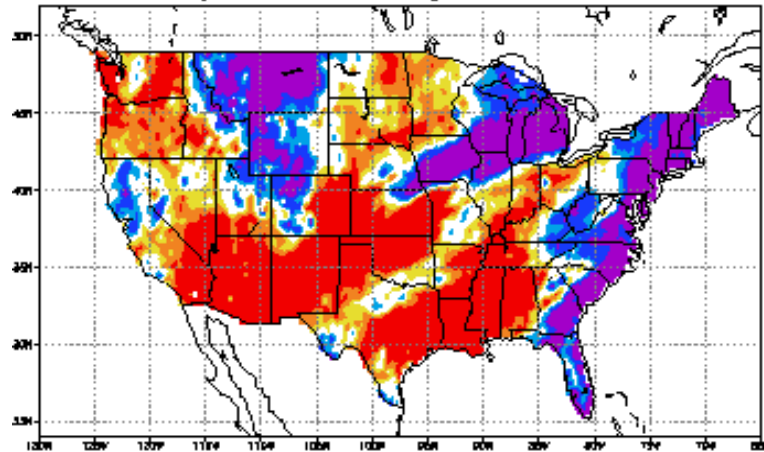
## Monthly Rainfall by County (October, 2003)



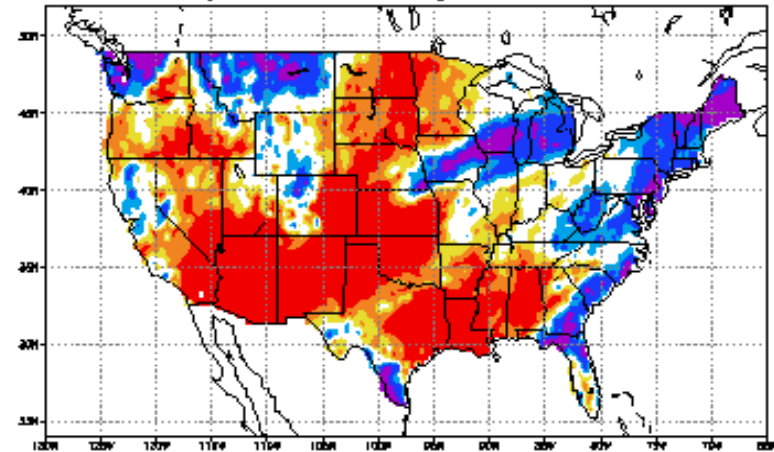
Data Source: Missouri Agricultural Statistics Service

# Precipitation, percent of normal, Last 15, 30, 45 and 60days

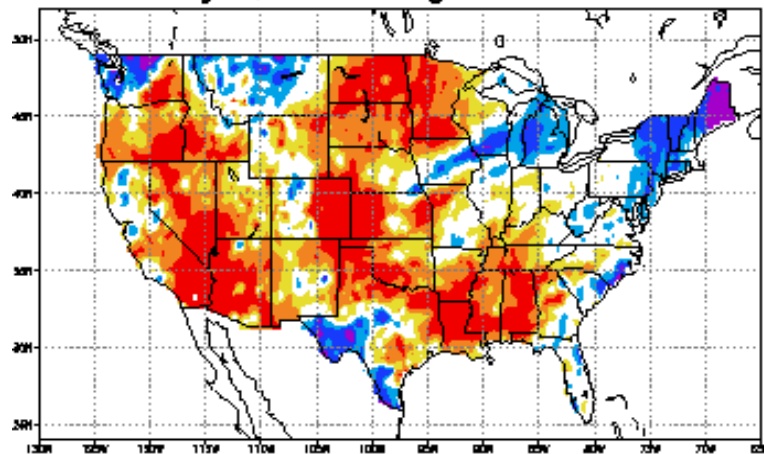
15 days, ending 2003Nov11



30 days, ending 2003Nov11



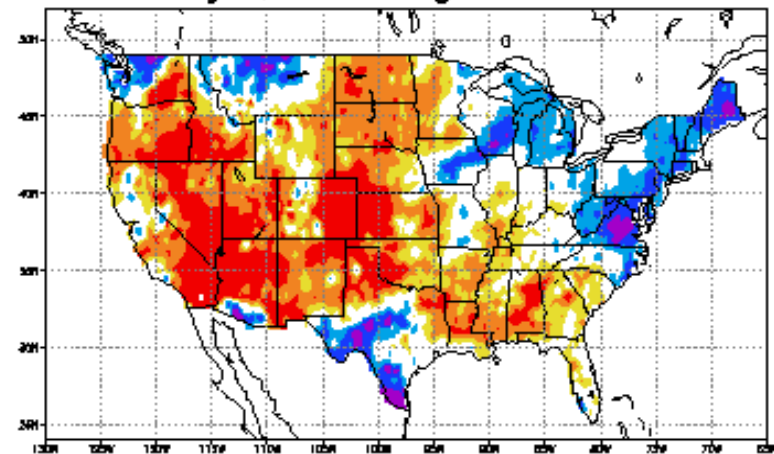
45 days, ending 2003Nov11



Dry

Wet

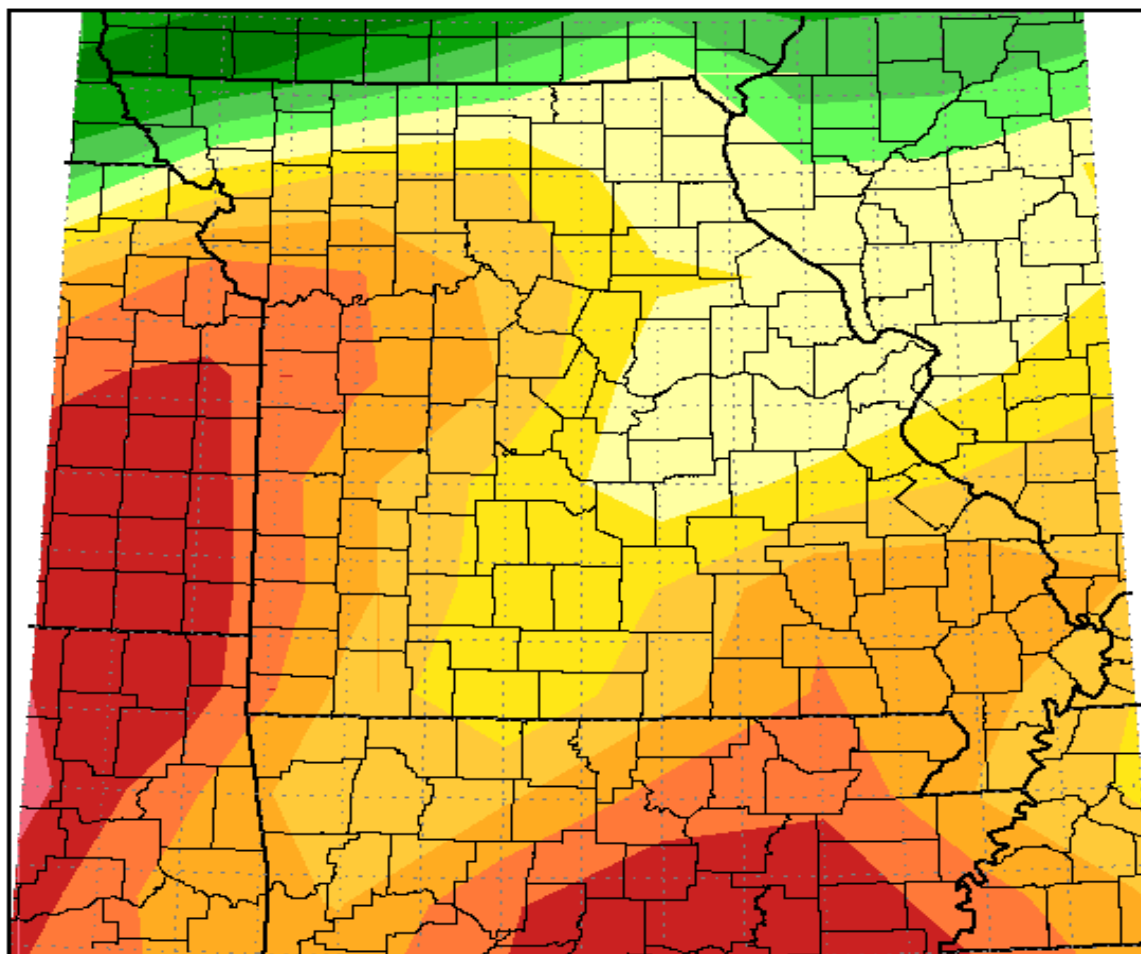
60 days, ending 2003Nov11



Dry

Wet

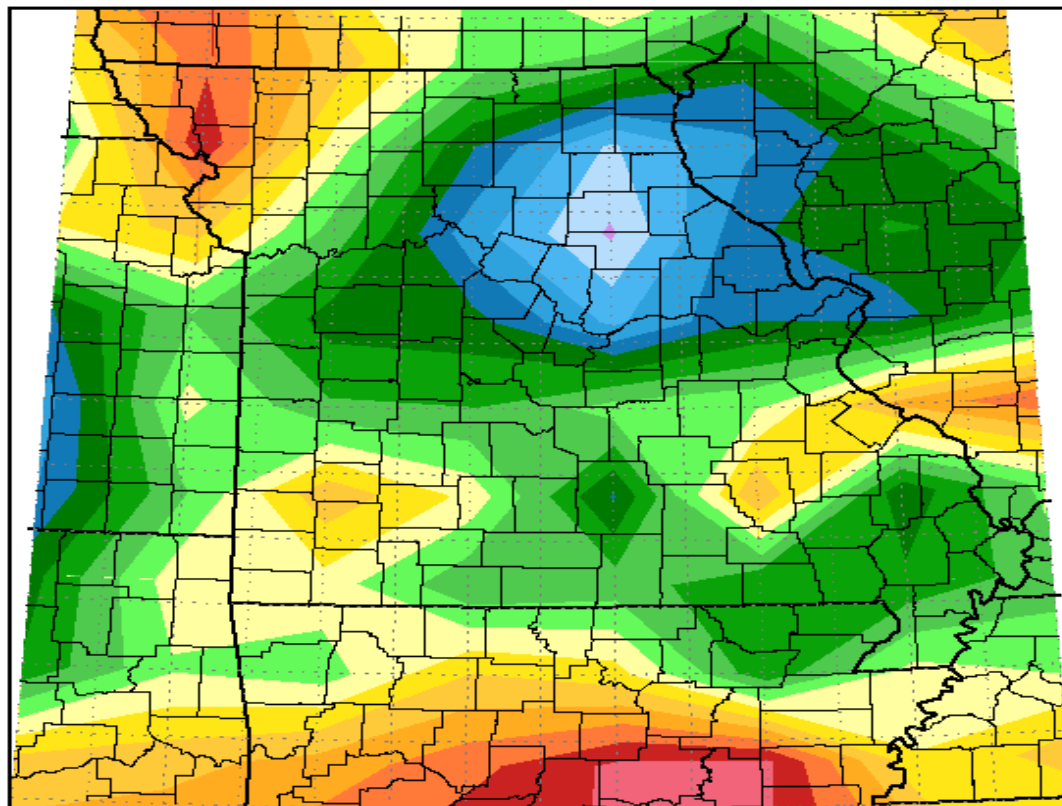
Total Precipitation Departure from Mean in Inches  
October 13, 2003 to November 11, 2003



Missouri Climate Center

Columbia, Missouri

Total Precipitation Departure from Mean in Inches  
August 14, 2003 to November 11, 2003

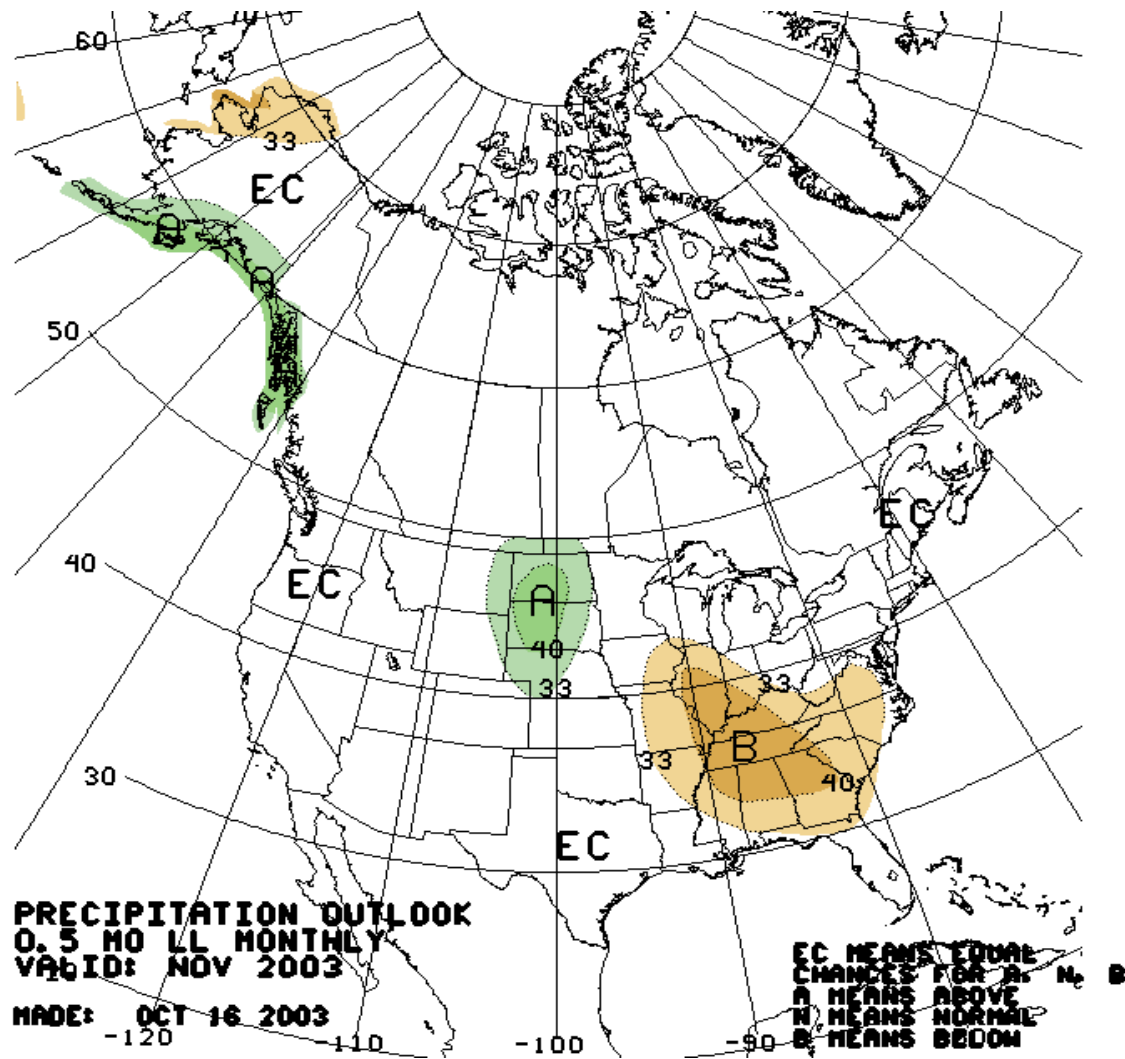


Missouri Climate Center

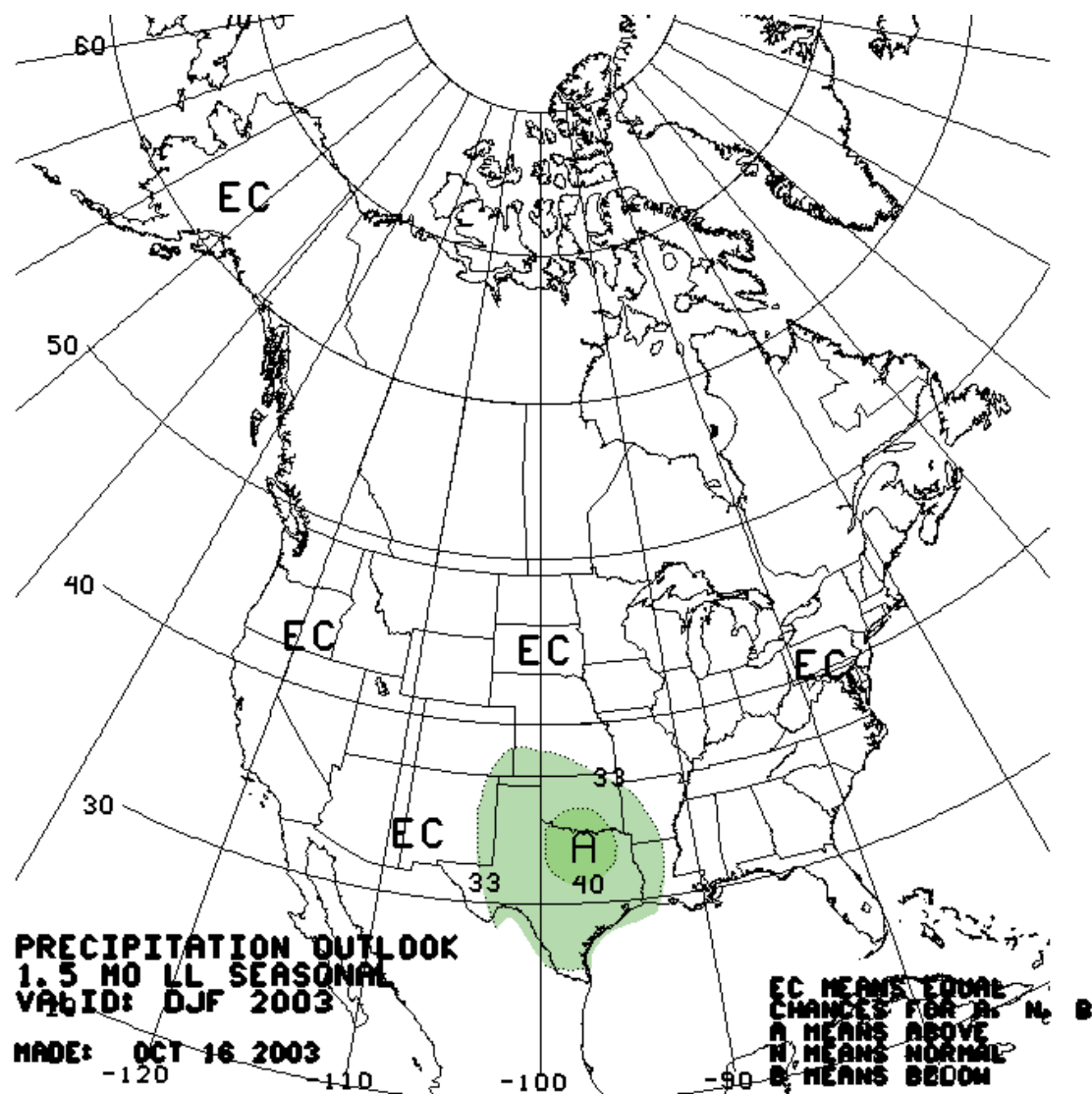
Columbia, Missouri



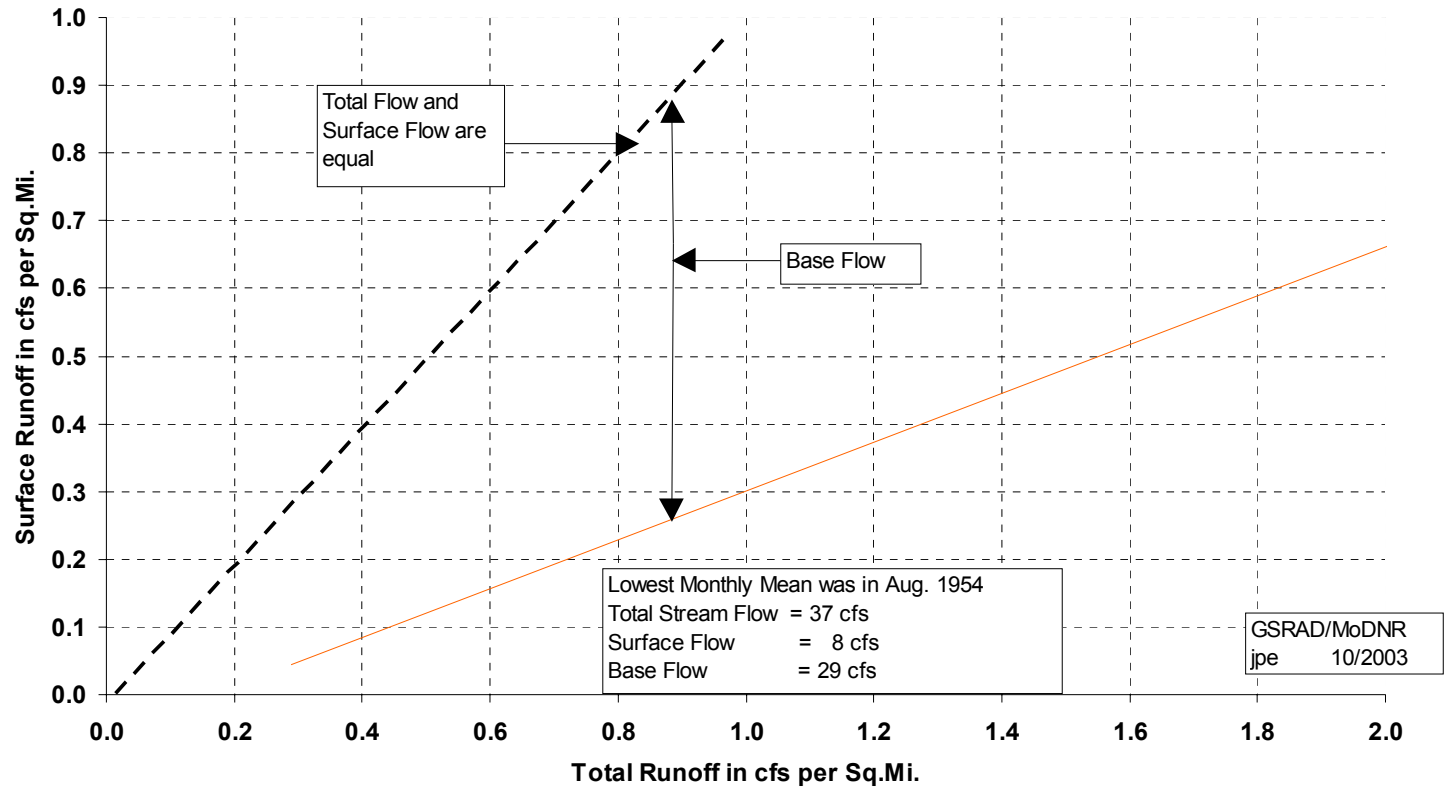
# Precipitation outlook for November



# Precipitation outlook for DJF



**Shoal Creek**  
**at Joplin, Mo.**  
**Drainage Area = 427 Sq.Mi.**  
**Period of Record 1950 through 2000**  
**Mean Annual Discharge in cfs per Square Mile**



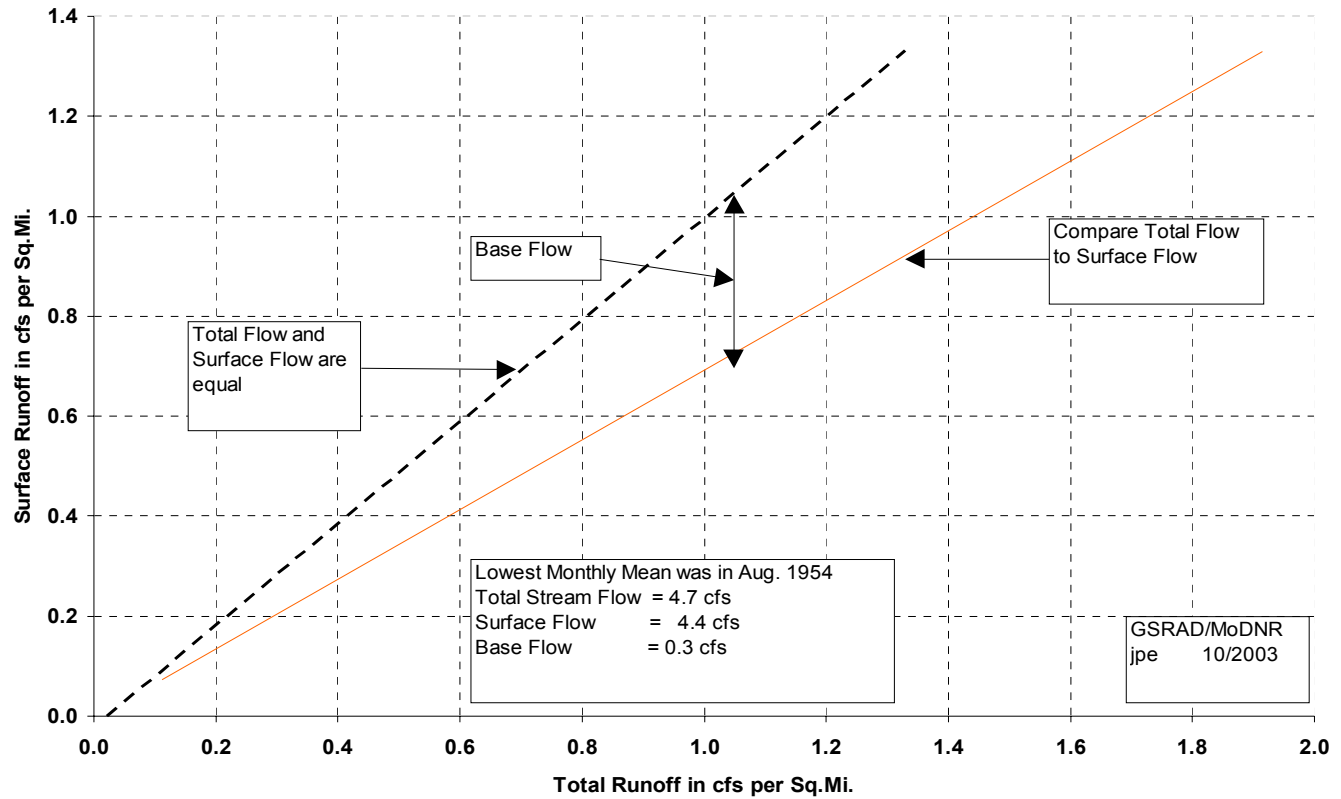
# Thompson River

at Trenton, Mo.

Drainage area = 1670 Sq.Mi.

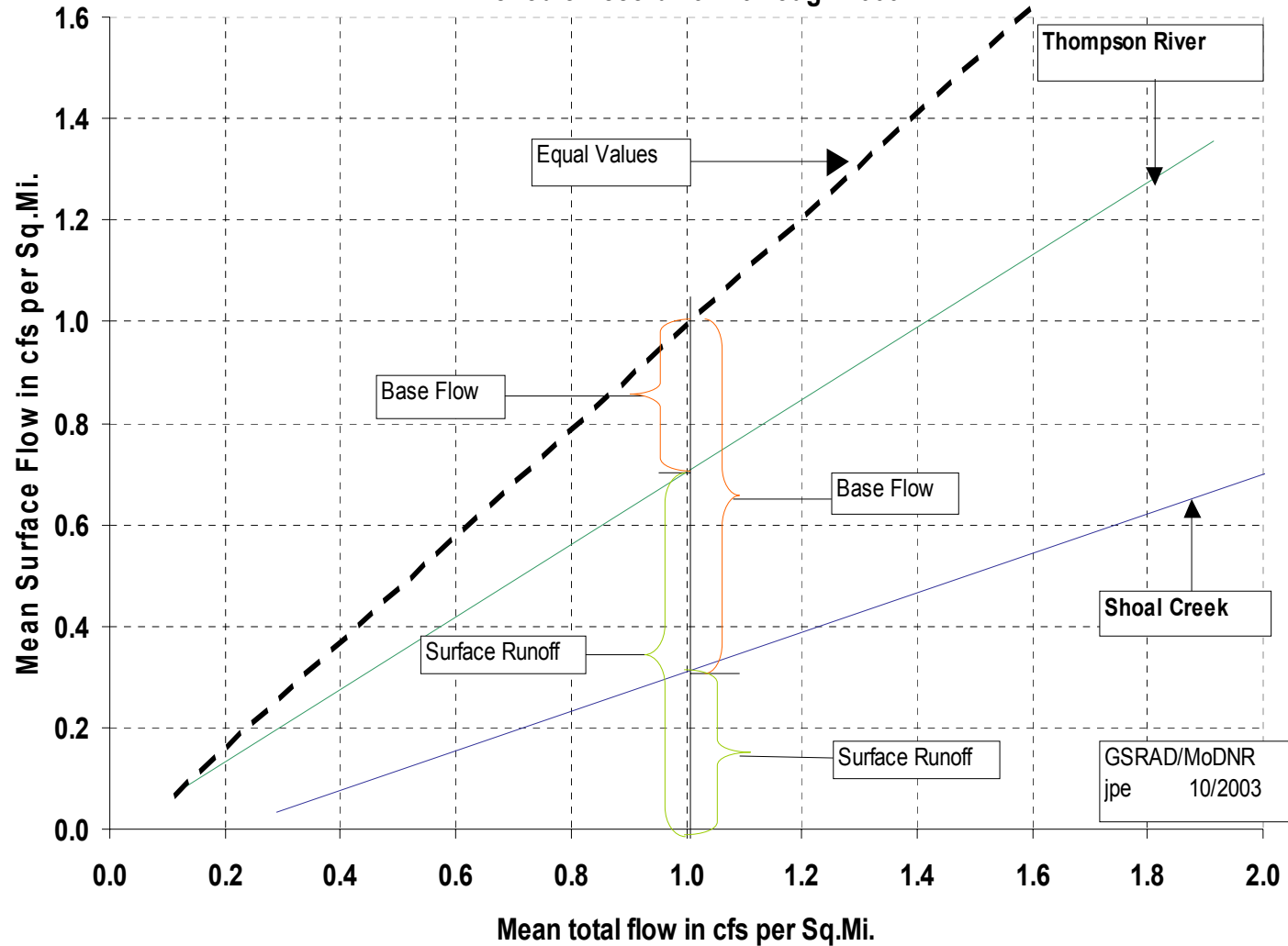
Period of Record = 1950 through 2000

Mean annual discharge in cfs per square mile

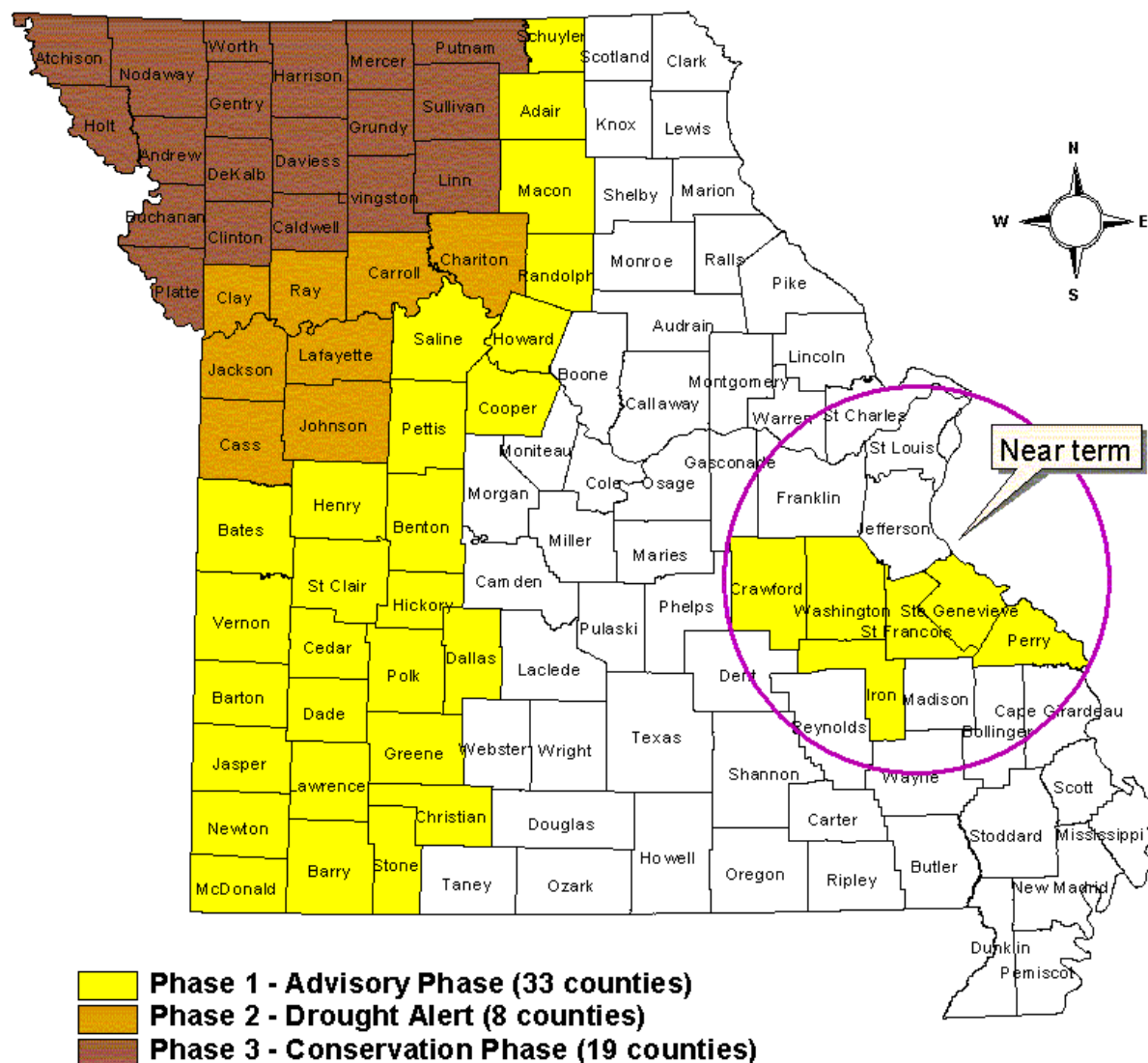




**Base Flow Display**  
Annual Runoff  
Shoal Creek and Thompson River  
Period of record 1942 through 2000



# Drought Condition Status (October 9, 2003)



## Recommended Drought Status (November 12, 2003)

